

ABSTRACT

Light L1 emitted by a light source unit 2 is non-polarized. The light L1 is transmitted by a phase modulation element 4 to be non-polarized light L2 and enters a polarization separation element 6 which transmits light polarized in a first polarized direction and reflects light polarized in a second polarized direction normal to the first polarized direction. The polarization separation element 6 transmits first linearly polarized light L3 and reflects second linearly polarized light L4 whose polarized direction is normal to the linearly polarized light L3. The linearly polarized light L3 goes to a light guide plate not shown. The linearly polarized light L4 enters a phase modulation element 4 to be transformed to circularly polarized light L5, and circularly polarized light L5 returns to the light source unit 2. The light L5 which has returned to the light source unit 2 repeats reflections, etc. in the light source unit 2 to be again non-polarized light L1 and exits the light source unit 2. As described above, a half of the light, i.e., the first linearly polarized light L3 is transmitted by the polarization separation element 6 to propagate to the light guide plate, and the rest of the light, i.e., the second linearly polarized light returns again to the light source unit 2. This process is repeated, whereby almost all light emitted by

the light source unit 2 enters the light guide plate to be utilized.